

SILURUS (PARASILURUS) ARISTOTELIS.

Glanis Aristotelis Ag., 1856, Pr. Amer.
Acad., 333 (named).

BY S. GARMAN.

B. 13 (12-14); D. 3; A. 72 (67-76); C. 18; V. 9 (9-10); P. 1 + 11 (11-12).

IN shape this species bears much resemblance to the *Silurus glanis* of Linné. Its body is elongate, depressed anteriorly, strongly compressed from the vent backward, the greatest depth in an eight-inch specimen being about one-fifth of the length without the caudal fin, and that portion of the length behind the vent being rather more than seven-elevenths of the total length. The head is broad, depressed, slightly arched across the crown, little less than one-fifth of the entire length, a trifle more than one and one-third times as long as wide, and is broad and rounded on the snout. Seen from above, the lower jaw appears to be the longer by the width of the band of teeth. There are but four slender threadlike barbels, of which the maxillary do not quite reach the end of the pectoral, not being one and one-half times as long as the head, while the mandibular are less than half as long as the maxillary. The eye is so small that its diameter is contained more than four times in the interorbital space, more than twice in the length of the snout, more than eight times in the length of the head, and is nearly equal to the distance from the base of the barbel. It is situated above and close to the

angle of the month. A broad interspace, more than half the diameter of the eye, interrupts the narrow band of vomerine teeth in the middle; they might be described as two short transverse bands, the length of each of which is a little more than twice its width. In the first series the gill-rakers are short, sharp, rigid, not as long as the eye, and vary in number from twelve to fifteen. The dorsal fin is very slender, having only three rays, and is situated at about two-sevenths of the distance from the snout to the end of the tail, or a little in front of the hinder extremities of the pectoral spines if they are applied to the sides. There is no adipose fin. The anal fin is long, nearly four-sevenths of the length, without the caudal, and contains, in most cases, more than seventy rays. One of the individuals in hand has only sixty-seven. At the end the caudal fin is rounded or subtruncate; generally it has eighteen rays, rarely there are nineteen; it is united with the anal less than half its length. The ventrals are farther back than the dorsal; on four specimens there are nine rays in each ventral fin, on two others there are ten rays in each, and one has ten rays in one ventral and but nine in the other. In length the pectoral fins equal the distance from the eye to the end of the opercle; they are broadly rounded on the posterior margin, and most often contain one spine and eleven rays; rarely the number of rays is twelve. The spine is strongly compressed; the teeth on its hinder edge are sharp pointed and comparatively large, those in front are distinct but smaller.

The coloration of the back and of the top of the head is brownish, of the sides silvery with rather coarse brown punctulations arranged in irregular nebulous groups which approximate to blotches along the base of the anal and on the anterior half of the caudal.

The description is taken from specimens in the Museum

of Comparative Zoology, collected by Dr. Roeser in the Acheloüs (Aspro) river in Acarnania, Greece. The largest is less than nine inches in length. From the young of *S. glanis* L., of equal length, they are readily distinguished by the possession of four barbels instead of six, by the difference in shape of those on the maxillaries — they being shorter, less compressed and more threadlike, by the wide separation in the middle of the band of vomerine teeth, by a larger eye, by a greater slope to the sides of the head, by a smaller dorsal, by the smaller number of rays in the anal, and by the markings.

Young individuals of *S. glanis*, from the Danube, have broader flatter heads, shorter lower jaws, smaller eyes, longer flatter maxillary barbels, smaller pectoral spines — without denticulations in front and with very small ones behind, blacker ventrals and pectorals, and flanks marbled with brown and white, the latter in irregular spots of varying depth but distinct definition. The eyes have less of a lateral outlook than in the Grecian species.

Apparently the new species is a near approach to that described as *S. chantrei*, by Sauvage, from the Koura (Kur) river, at Tiflis, a stream flowing into the Caspian. The characters given that species are "D. 3; A. 65; P. 1 + 13; V. 10." "Allié au *S. afghana*, Günther, en diffère par l'épine pectorale non dentelée, la bande vomérine subinterrompue au milieu, les barbillons plus longs." Günther's type had maxillary barbels twice as long as the head, vomerine teeth in a very narrow, uninterrupted curved band, a pectoral spine without denticulations, a dorsal with two rays and an anal with seventy.

The specimens above described are undoubtedly those of which Prof. L. Agassiz speaks in his communication to the American Academy of Arts and Sciences, Nov. 12, 1856, published in volume III of its Proceedings, p. 325.

On page 333, he gives the name *Glanis Aristotelis*, without a description. To complete the history of this fish we should have to include the references of Aelian, Athenaeus, Pliny and subsequent writers who have depended on the great Grecian author for their information. Though the species is allied to the *Silurus glanis* of Linné, it falls into a different division of the genus on account of the smaller number of barbels. It pertains to the group to which Bleeker gave the name *Parasilurus*, the members of which have but four barbels. The distribution of *Parasilurus* is thus shown to extend from the Adriatic across the entire southern part of Asia, and from the Caspian southward.